

CARR (W. P.)

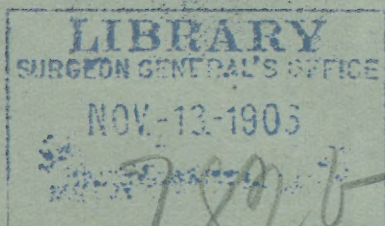
Symphiseotomy

BY ✓

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REPRINTED FROM
THE AMERICAN JOURNAL OF OBSTETRICS
Vol. XXXVIII No. 1, 1898.

NEW YORK
WILLIAM WOOD & COMPANY, PUBLISHERS
1898



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SYMPHYSEOTOMY.¹

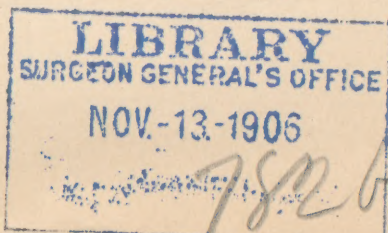
I AM convinced that in the operation of symphyseotomy we have a most valuable resource in suitable cases, and that many of its most objectionable features and dangers may be avoided by a proper technique.

I will begin my paper by relating the histories of two cases.

CASE I.—A primipara, white, 26 years old, strong and healthy. Labor began about 10 A.M. November 5, 1895, and at 4 P.M. the pains were strong and regular. I examined her at that time and found little or no dilatation of the os, the head presenting and very high in the pelvis. The pains continued through the night and were unusually strong and regular. At 4 A.M. a pouch of waters had formed and dilated the os pretty well, but there was no descent of the head. I then called in Dr. Ruffin, who anesthetized the patient while I ruptured the membranes and applied forceps. The head was above the superior strait and I could not make it engage. The position was L. O. A., but could be easily changed, as the head was freely movable.

After Dr. Ruffin and myself both had failed even to get the head to engage and had used all justifiable force, we concluded that it was a case for symphyseotomy. The woman was given a hypodermatic of morphia and preparation made for the operation. At 9 A.M., with the assistance of Dr. A. F. A. King, Dr. Sterling Ruffin, and Dr. Rozier Middleton, the operation was done without difficulty. The tissues were completely separated from the under surface of the symphysis close to the bone, so that the finger could be passed completely round the symphysis before the joint was divided. The division was made with a Galbiati knife, and considerable force was necessary, as the rami of the pubes were unusually wide and thick

¹ Read before the Washington Obstetrical and Gynecological Society.

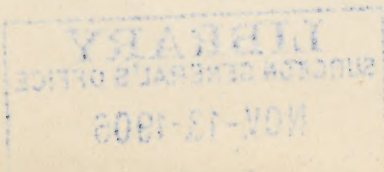


and the joint irregular in shape. The knife could not be made to follow all the irregularities of the joint, and I was obliged to cut through some bony projections on each side. As soon as the bones were divided, though the head had rotated to the R. O. P. position, delivery was easily and quickly accomplished with forceps, the bones separating spontaneously for a distance of two or two and a half inches. The operation was finished and the wound closed in twenty-five minutes. There was no hemorrhage, and the bones were not sutured in any way, but were held in place by a wide strip of adhesive plaster going all round the pelvis. The wound healed without suppuration, but there was an abundant serous discharge from it for several days. This must have amounted to a quart during the second twenty-four hours after the operation, and at first I was alarmed, thinking it must be urine escaping from the bladder. It proved to be only synovial fluid; but I was surprised to find that so small a synovial membrane as that of the symphysis could secrete such a quantity of fluid.

Seven weeks after the operation the mother was able to resume her housework. She is a strong, hearty woman, does her own work, washing and ironing, and does not show the slightest sign of lameness nor complain of any inconvenience from the operation. There was no complaint at any time, except about the adhesive strap, which was kept on for five weeks. The child was born asphyxiated and would probably have died but for the skilful attentions of Dr. King, who took him in charge. He is now a hearty, well-developed boy 26 months old.

Dr. King was of the opinion that the main difficulty in this case was due to the posterior position of the occiput, and was doubtful of the necessity for the operation. I am sure, however, that at the time I was using forceps the occiput was anterior, and Dr. Ruffin will confirm this opinion. I am also sure that when I am unable to make a head engage after a thorough trial, no matter whether the occiput is anterior or posterior, that head cannot be delivered with the child alive without some cutting operation upon the mother.

The pelvic external measurements, made subsequently by Dr. King and myself, were as follows: Conjugate, $7\frac{1}{2}$ inches; bisiliac, $9\frac{1}{2}$ inches between the crests, $8\frac{1}{2}$ inches between the anterior superior spinous processes. These measurements show only an inch of shortening in the transverse diameter. The bones, however, were unusually thick, the pelvis conforming to the masculine type, and I am satisfied that all the internal diam-



eters are below the normal. The diameters of the child's head, measured a few hours after birth, were all about one-quarter of an inch greater than the normal.

The mother is again pregnant and expects to be confined about the 15th of next August. I have advised her to have the labor brought on at the end of the eighth month, and would like to have the opinion of the Society as to the advisability of doing so. Labor came on spontaneously about the eighth month and a small but healthy child was born after a normal and easy labor.

CASE II —A white primipara, age 39, a small, delicate woman, was attended in labor by Dr. Warwick Evans. She was in labor about thirty-six hours before there was sufficient dilatation of the os to allow the application of forceps. The dilatation was produced by the bag of waters, the head remaining high in the pelvis. Symptoms of tedious labor became pronounced, and Dr. Middleton was called in to give ether while Dr. Evans applied forceps, finding it necessary even then to make some manual dilatation of the os. Forceps was tried thoroughly by both Drs. Evans and Middleton, but they were unable to make the head engage. The patient took the anesthetic badly and went into an alarming collapse after being under it about an hour. For a time it seemed that she was dying; but she revived somewhat, and I was called in consultation with a view to operative interference.

I saw her first October 28, 1897, about 12 P.M. She was in a very critical condition, pulse 150 and very weak, respiration 40 and shallow, unable to speak above a whisper, and complaining of great pain, though the labor pains were almost abolished. The child's head was above the brim of the pelvis, and I was barely able to reach it with the tip of my finger and was unable to make out the position. The lips of the cervix were much swollen and almost protruding from the vulva. Antero-posterior diameters of pelvis normal. Transverse, at brim, 3 inches; at outlet, 3 inches. The child was supposed to be alive, as movements had been felt a short time before, but the fetal heart was not audible.

After consultation it was agreed that nothing was to be gained by further trial of forceps or by version and that the choice lay between craniotomy and symphyseotomy. Believing that craniotomy with the head so high in the pelvis and the cervix so swollen would be a tedious and dangerous operation, I advised symphyseotomy as the only hope of saving either

mother or child. Leaving the child out of consideration, I believed that symphyseotomy could be accomplished in less time and with less risk from the anesthetic and from shock than craniotomy or any of its modifications. In this opinion Dr. Evans and Dr. Middleton acquiesced, and at 1 o'clock, Dr. Ruffin having been called in to assist, the operation was begun. Dr. Middleton gave the ether very carefully, and to his care and judgment in this particular I believe the patient owes her life.

The operation was done as in the previous case, and in less than ten minutes the bones were divided. They did not separate spontaneously, as in the preceding case, but required some pressure on the crests of the ilium to cause a separation of about two inches. There was no hemorrhage. Delivery was accomplished in about twenty minutes with some difficulty, owing to the position being mento-anterior and the forceps slipping. The child was dead when delivered. A strong silk mattress suture was placed in the tough anterior pubic ligament, and by this means the bones were drawn in close apposition. The wound was closed and dressed, and a wide strip of adhesive plaster applied around the pelvis.

The patient took the ether badly, respiration stopping several times, and at the close of the operation she was in a very critical condition, respirations 40, pulse 160, and very weak. Next morning she was somewhat improved, but still very weak, unable to speak above a whisper, and suffering from a troublesome cough caused by a severe capillary bronchitis. Her respirations were still 40 per minute, pulse 130. This capillary bronchitis continued for six weeks, the respirations varying during that whole period between 32 and 44 and then gradually declining to normal. The temperature ranged from 99° to $102\frac{1}{2}^{\circ}$, and was partly due to the bronchitis and partly to absorption of septic matter from the uterus. I washed out the uterus on the third or fourth day, removing a considerable quantity of foul-smelling clots and shreds, and this was followed by improvement. It was feared from her symptoms that she had developed acute tuberculosis, and I took a specimen of her sputum to Dr. Carroll for examination. He found no tubercle bacilli, but a very large number of the diplococcus lanceolatus.

Meantime there was no suppuration or apparent infection of the wound, and at the end of the eighth day, when I removed the stitches, it appeared to be perfectly healed. The bones,

however, were one-half inch apart, and it was impossible to keep them in close apposition, owing apparently to the constant shrinking of the abdomen and muscles around the pelvis and the consequent loosening of the adhesive strip. Plaster casts were tried with no better effect, but the plaster cast was more comfortable and seemed to diminish motion and consequent pain in the sacro-iliac synchondroses.

About the twelfth day a small opening appeared in the scar, through which urine began to discharge, and this opening increased in size until it would admit the tip of my finger. No visible pus came from this sinus, but urine dribbled from it constantly and added much to the difficulty of nursing. I was able to pass a probe into the sinus, between the cut surfaces of the pubic bones, which were separated by a quarter of an inch, and into the urethra until the end appeared at the urinary meatus. The sinus seemed to open into the urethra near the neck of the bladder. I am satisfied that this trouble was produced by the pinching and bruising of the urethra between the ends of the bones, these ends remaining separated most of the time, but knocking together upon movement of the body. The silk ligature in the anterior pubic ligament proved worse than useless and was finally discharged through the sinus. Three weeks after operation the sinus had become quite small and was filling in with healthy granulations. A catheter was then kept in the bladder for five days, during which time the sinus healed completely. The patient complained greatly of pain produced by her cough or by the slightest movement. This pain was referred to the hips as a rule, but occasionally to the wound or to her back and thighs.

At the end of four weeks the bones were still freely movable, and it was not until six weeks after the operation that they became united. Just about this time another complication appeared in the shape of phlegmasia dolens. This, however, also subsided in about a week. At the end of seven weeks the bones were firmly united, and by the tenth week the patient was walking about her room. She is still weak, and has just recovered from a second attack of capillary bronchitis less severe than the first. She has now no symptom that can be attributed to the operation and is improving in general health and strength every day.

Lusk¹ says of symphyseotomy that "its worst enemies are those who preach its simplicity and who ignore the risks in-

¹ Dennis' "System of Surgery," vol. iv., p. 80.

volved in its employment. It is not in all cases easy of accomplishment. The avoidance of hemorrhage and lacerations calls for constant vigilance, and the after-treatment involves an infinite amount of painstaking."

From my own observation and that of others, I think I may safely say that the most objectionable features of the operation are the difficulty and discomfort of keeping the bones in apposition by the methods in vogue, and the consequent danger of pinching the urethra or bladder, the danger of hemorrhage, and the danger of infection in a wound so close to the vulva and urinary meatus. I believe, however, that by careful attention to technical details all these objectionable features may be overcome.

The ordinary rules of asepsis and antisepsis must, of course, be rigidly observed, and in addition I have the following three suggestions to make.

1. The incision need not extend as low as it is usually made. The lower angle of the wound may be pulled down with a retractor, after the incision has been made down to the bone, and sufficient room thus gained to complete the operation safely without extending the skin wound nearer than two inches to the urinary meatus. This I believe to be an important detail, as it greatly lessens the chances of infection.

2. The bone should be carefully and thoroughly separated from the tissues behind and below, great care being taken to keep next to the periosteum. It is also important that this separation extend from three-fourths of an inch to one inch on each side of the median line, to insure the safety of blood vessels and urethra when the bones are separated. Several large anterior vesical veins and veins from the clitoris lie embedded in the fat and loose connective tissue between the anterior wall of the bladder and urethra and the posterior and inferior surface of the pubic arch; but these vessels are safe and the urethra is safe if freeing of the bone be carefully done. After the bones are freed all around, the joint may be divided with a Galbiati knife, or preferably with an ordinary scalpel if the precaution be taken of first passing a grooved guard behind the line of incision, as recommended by Farabœuf, Lusk, and others. The articular surfaces are not plane surfaces. Irregular rounded projections of bone, except in very young subjects, will frequently be found passing across the median line from one side or the other and fitting into corresponding concavities of the opposite bone, with only a thin layer of cartilage be-

tween. This makes the line of incision irregular, and the irregularities can be better followed with a thin, sharp-pointed knife. If a thick knife be used these bony projections must be cut through forcibly.

3. I would recommend wiring the bones. I can conceive of no possible valid objection to uniting them firmly with stout silver wire, and believe that this will very materially shorten the time necessary for firm union, that it will insure firm union, and that it will add immensely to the comfort of the patient subsequent to operation. I am aware that necrosis and suppuration have been attributed to the use of silver wire in this manner, but I freely confess that I do not believe such troubles can be justly attributed to the wire or the wiring. They could have been due to nothing but infection, and should infection of the wound occur it would be an easy matter to remove the wire. Farabœuf, Pinaud, and Caruso recommend silk sutures through the tough ligamentous tissue anterior to the pubes. Such silk sutures are worse than useless. When the strain of separation comes upon them they will tear through the tough tissues like hot wire through butter; and silk ligatures are vastly more irritating and vastly more apt to become infected than silver wire.

It has been pretty thoroughly and conclusively proved by Kelly and Halsted and many others, among whom might be included Marion Sims, that silver wire is the least irritating of all sutures; that it rarely, if ever, has to be removed on account of suppuration; that, on the contrary, it strongly tends to prevent infection. Silver sutures may be put through the bones almost as easily and quickly as silk through the ligaments. Bone is the only tissue in which ligatures subjected to such a strain will hold, and two stout silver wires will stand the strain and maintain perfect apposition. Lusk says: "The weak side of symphyseotomy is the imperfection of all methods thus far devised to secure coaptation of the parted surfaces after the operation." I believe that the weak side may be made strong, and that we are entirely wrong in blaming silver wire with bad results due to infection or other causes. The safest of all material to bury is silver, and the safest material to bury it in is bone.

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